

1 **EXPERT TESTIMONY-RAMÓN CAO**

2 **Introductory Questions**

3 **Q. State your name.**

4 Ramón Cao García

5 **Q. State your business mailing address.**

6 Urb. Cupey Gardens, C-11 Calle 3, San Juan, PR 00926-7306.

7 **Q. State your educational background.**

8 Ph.D. in economics from Virginia Polytechnic Institute & State University, Blacksburg, VA.

9 **Q. Describe your professional experience and qualifications.**

10 I am a retired professor from the University of Puerto Rico, Río Piedras Campus [UPR-RP], where
11 I taught economics, statistics and econometrics. I am author, coauthor or editor of 11 books in
12 economics and statistics and author or coauthor of over 50 academic articles published in journals
13 with peer review. At UPR-RP, in addition of teaching, I also served as Director of the Economic
14 Research Unit. Chairman of the Department of Economics, Associated Dean of Academic Affairs
15 in the College of Social Sciences.

16 I also worked as consultant for UNDP of the UN, and has been consultant of numerous government
17 and private organizations in Puerto Rico and private enterprises in Puerto Rico.

18 In 2019 I was retained by the Customers' Representative to PREPA Board of Directors to do two
19 economic and financial expert reports about expected consequences of PREPA's RSA; one on
20 macroeconomic consequences of the RSA on the Puerto Rican economy and another on expected
21 effects of that RSA and the financial sustainability of PREPA.

22 **Q. State whether you have previously testified or presented before the Title III Court and list
23 the occasions.**

24 I prepared the expert reports of the RSA indicated in the answer to previous question.

25 Q. State on whose behalf you are testifying before the Title III Court.

26 I am testifying on behalf of ICSE.

27 Q. List the documents you considered for your testimony.

²⁸ Among other secondary resources and relevant news articles, as cited herein, I reviewed:

- 29 A. Plan of Adjustment and all associated schedules.

30 B. Disclosure Statement and all associated exhibits.

31 C. 2023 Commonwealth Certified Fiscal Plan.

32 D. 2022 PREPA Certified Fiscal Plan and all prior PREPA Certified Fiscal Plans.

33 E. PREPA Monthly Reports to the Governing Board.

34 F. LUMA's budgeted and actual operating expenditures as reported to PEB.

35 G. PREPA's Grid Modernization Plan.

36 H. PREPA's approved Integrated Resource Plan.

37 I. PREB's docket in CEPR-AP-2015-0001 on PREPA rates.

38 J. Puerto Rico Planning Board, Proyecciones Económicas a Largo Plazo, Años Fiscales 2021
39 al 2031.

40 K. Puerto Rico Planning Board, Apéndice Estadístico al Informe Económico al Gobernador y
41 la Legislatura, 2021.

42 L. Federal Reserve Bank of Saint Louis, Federal Reserve Economic Data (FRED)

43 M. U.S. Energy Information Administration, <http://www.eia.gov/state/?sid=RQ>

44 **Q. Describe the purpose of your direct testimony.**

45 The purpose of my testimony is to show that the proposed Plan of Adjustment is not feasible,

46 because it (a) is based on faulty and unreasonable economic assumptions and projections, (b) is

47 not consistent with the Fiscal Plan of PREPA, (c) does not provide for investments required for the

48 needed modernization of the electric grid, and (d) results in electricity tariff fees that are
49 unaffordable to the economy and are going to result further restraining its ability to perform and
50 create needed income, investment and employment.

51 **I. The Plan of Adjustment is not supported by reasonable projections.¹**

52 **Q. Is the Plan of Adjustment supported by reasonable financial projections?**

53 Both the PREPA 2022 Certified Fiscal Plan (Fiscal Plan) and the supporting documentation
54 (specifically Exhibit P, “Legacy Charge Derivation”) of the Disclosure Statement² are the
55 documents supporting the feasibility of the Financial Oversight and Management Board for Puerto
56 Rico (FOMB) proposed new Plan of Adjustment is feasible, but projections in both documents are
57 based on assumption that are inconsistent with historic statistical data:

- 58 1. Population projections used in PREPA Fiscal Plan of 2022 are significantly higher than
59 those reported in the previous one. No justification is provided to justify such forecast
60 modification. This change in projection tends to overestimate demand forecasts for
61 electricity and, in consequence, to underestimate required electricity tariff rates increases
62 required to finance debt service required, as well as the financing of the pension fund.
- 63 2. Long term demand for electricity is also overestimated, because price elasticity cannot be
64 assumed constant over such a long-term period; particularly because customers have the
65 choice of installing solar energy generating systems on their premises, at a time when there
66 is a trend to price decrease for these systems, as well as government subsidies.

¹ All references to “Plan of Adjustment” in this testimony refer to the *Modified Second Amended Title III Plan of Adjustment of The Puerto Rico Electric Power Authority* filed at Case No. 17-04780-LTS, ECF 3296, the exhibits and other materials attached to the Plan of Adjustment, and any and all amendments which were available at the date of this testimony.

² All references to the “Disclosure Statement” refer to the *Disclosure Statement For Modified Second Amended Title III Plan Of Adjustment Of The Puerto Rico Electric Power Authority* filed at Case No. 17-04780-LTS, ECF 3297, the exhibits and other materials attached to the Disclosure Statement, and any and all amendments which were available at the date of this testimony.

- 67 3. Long term projections of real GNP growth are overly optimistic. Since FY2007 Puerto
68 Rico has a structural economic contraction, and recent GNP growth has been caused by
69 increases in federal transfers, to compensate for damages caused by natural phenomena.
70 4. FOMB projections of oil and natural gas prices are inconsistent with long-term behavior
71 of these variables. This underestimates PREPA operation costs and, in consequence,
72 electricity tariff rates required. As these rates increase, quantity demanded declines, and
73 further increases in tariff rates are required to cover for debt service.

74 **Q. What is the consequence of including these unrealistic assumptions in the Fiscal Plan?**

75 These assumption results in underestimating expenses and, in consequence, required electricity
76 tariff rates, putting in jeopardy the ability of PREPA to have sufficient funds to pay for the debt
77 service of the legacy debt. It should be also noted that the FOMB has made no study or evaluation
78 of macroeconomic consequences of its proposal to restructure PREPA's legacy debt. Our estimates
79 that the implementation of this proposal tends to result in a reduction of Puerto Rico real GNP of
80 \$155.0 million or 2.70% in FY2024 and \$472.4 million or 8.59% in 2020, which tends to cause
81 reduction in employment of 25,010 in FY2024 and 79,472 in FY2030.

82 **Q. Even given these unrealistic assumptions, do the Legacy Debt levels in the Plan of
83 Adjustment comport with the Debt Sustainability Analysis contained in the Fiscal Plan?**

84 The Debt Sustainability Analysis in the Fiscal Plan establishes a range of debt levels from \$2.44
85 billion to \$5.61 billion.³ The actual debt level identified in the Plan of Adjustment is \$5.68 billion
86 for Legacy Debt and \$2.425 billion for capital expenditures not included in the Fiscal Plan, for a
87 total of \$8.11 billion in new debt that would be emitted over the Plan of Adjustment period. This

³ See Table 15 of PREPA's 2022 Certified Fiscal Plan. We also note that the Debt Sustainability Analysis does not actually arrive at any conclusion about whether these levels of debt are economically sustainability or fiscally viable for PREPA.

88 is significantly higher than the range presented in the Debt Sustainability Analysis. In consequence,
89 the Debt Sustainability Analysis in the Fiscal provides no information about the ability that PREPA
90 would have to pay for its debt, if it is restructured as proposed.

91 **Q. Does the proposed Plan of Adjustment provide adequate funds for PREPA's investment
92 requirements.**

93 Plan of Adjustment includes \$5.68 billion for Legacy Debt and \$2.425 billion for capital
94 expenditures not included in the Fiscal Plan. But PREPA produced a Grid Modernization Plan with
95 a total cost of \$20.3 billion over the next 10 years in October 2019.⁴ That Plan was going to be
96 financed with 14 billion from the federal government transfers and the other \$6 billion should
97 come from debt financing.⁵ That amount is much higher than the \$2.425 billion for capital
98 expenditures considered in the Plan of Adjustment.

99 **Q. Please summarize the conclusions of your testimony.**

100 My testimony stated that:

- 101 1. The Plan of Adjustment is not supported by reasonable economic projections. Assumption and
102 projections in this Plan of Adjustment results in underestimating expenses and, in consequence,
103 required electricity tariff rates, putting in jeopardy the ability of PREPA to have sufficient funds
104 to pay for the debt service of the legacy debt and provide for the financing of investments to
105 modernize the electric grid, which are required for the provision of a reliable electric service.
106 Thus, the Plan of Adjustment is not feasible.
- 107 2. The Plan of Adjustment and PREPA Fiscal Plan does not consider the macroeconomic
108 consequences of electricity rate increases. Rate increases proposed in the plan will tend to
109 result in reductions in real GNP and employment.

⁴ Autoridad de Energía Eléctrica. [The Grid Modernization of Puerto Rico](#).

⁵ PREPA's 2022 Certified Fiscal Plan at 86, Table 5 and explanation.

110 3. An economic contraction resulting from implementing the Plan of Adjustment is going to put
111 in jeopardy the capacity of PREPA to have sufficient funds to pay for the debt service of the
112 legacy debt.

113 4. The Plan of Adjustment does provide for PREPA to have adequate fund to finance required
114 investments to modernize the electric grid, in order to provide a reliable service and stop being
115 a constrain to the ability of the economy to perform efficiently. Thus, the Plan of Adjustment
116 is not feasible.

117 **I declare under penalty of perjury pursuant to the laws of the United States of America that**
118 **the foregoing is true and correct to the best of my knowledge and belief.**

119 Dated: April 28, 2023.

Ramón J. Cao García.

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121 Ramón J. Cao García